



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION 8

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Ref: 8EPR-N

Scott Armentrout, Forest Supervisor  
Grand Mesa, Uncompahgre, and  
Gunnison National Forests  
2250 Highway 50  
Delta, Colorado 81416

Re: Draft Environmental Impact Statement for the Spruce Beetle Epidemic and Aspen Decline Management Response Project; CEQ # 20150151

Dear Mr. Armentrout:

The U.S. Environmental Protection Agency Region 8 has reviewed the U.S. Department of Agriculture Forest Service's (USFS's) Draft Environmental Impact Statement (EIS) for the Spruce Beetle Epidemic and Aspen Decline Management Response Project (Project). The USFS Grand Mesa, Uncompahgre and Gunnison (GMUG) National Forests propose to proactively and adaptively respond to declining forest conditions that have resulted from large-scale insect and disease outbreaks by promoting recovery from the insect outbreak, improving the resiliency of green stands to future disturbances, and providing for human safety. Our review was conducted in accordance with the EPA's responsibilities under section 102 of the National Environmental Policy Act (NEPA), and Section 309 of the Clean Air Act (CAA).

**Project Background**

The Project proposes to treat spruce and aspen forests impacted by the ongoing spruce beetle epidemic and sudden aspen decline (SAD), as well as areas identified as high risk across the GMUG National Forests that are located on the western slope of the Rockies and into the Colorado Plateau. Of the 3,161,900 acre range, the GMUG has experienced approximately 223,000 cumulative acres of spruce beetle mortality and 229,000 acres of affected aspen over the past decade. The Project's adaptive and integrated approach will be applied at the landscape level to define opportunity areas available for treatments, priorities for treatment, parameters and design features, operating protocols, monitoring and activity tracking. The primary tools for reducing tree mortality, safety threats and fire hazard in stands already experiencing beetle-induced mortality will be the removal of dead and dying trees. Forest resiliency will be addressed under some alternatives in threatened stands by reducing stand densities. Aspen stands may be identified as candidates for regeneration treatments. Management tools may include one or more of the following: commercial harvest; non-commercial treatments (mechanical and prescribed fire); recovery and resiliency treatments; hazard tree removal; and reforestation. Temporary and/or designed road construction will likely be necessary.

Although landscapes of various extent are identified as opportunity areas and analyzed under the action alternatives in the Draft EIS, the USFS is proposing treatments for a maximum of 120,000 acres under all action alternatives over the approximate 8-12 year implementation period of the Project. In addition to the No Action alternative, three action alternatives are identified. Alternative 2 (Proposed Action)

includes a total of 718,000 opportunity acres where commercial, non-commercial and mechanical and prescribed fire treatments could be implemented. Commercial treatments on suitable timber production areas would be largely limited to the identified 24 focus Lynx Analysis Units (LAU), while non-commercial treatments would be primarily focused outside of suitable lynx habitat. Alternative 3 (Public Safety Focus) limits the geographic extent of treatments exclusively to the wildland urban interface (WUI) and outside the WUI, proximal to roads and additional human infrastructure, for a total of 426,000 opportunity acres. Alternative 4 (Spruce Salvage) limits spruce treatments to salvage only, and aspen treatments would be the same as Alternative 2. The potential treatment area would be the same as Alternative 2 (718,000 acres), except commercial mechanical treatments would also occur in areas outside of the 24 identified focus LAUs, resulting in an additional 50,000 acres available for commercial treatment opportunities compared to Alternative 2.

## **Comments and Recommendations**

Our comments on the Draft EIS focus on whether there is sufficient information to determine impacts when site-specific treatment locations are not identified at this point in the NEPA process. Where impacts cannot be predicted, it is imperative that safeguards are in place such as the design features, best management practices (BMPs) and adaptive management frameworks. In some instances we understand that projecting potential impacts may be difficult without site-specific information. However, there may be information currently available that would be beneficial to include in the Final EIS to provide for a more robust analysis. Our concerns and/or recommendations are primarily related to potential impacts to aquatic resources, including fens, as well as the air resources analyses.

### **1) Aquatic Resources**

The area includes aquatic resources having high Watershed Condition Class scores and hydrologically dependent riparian areas and wetlands including fens. The EPA considers protection of aquatic resources to be among the most important issues to be addressed in the NEPA analysis for vegetation management activities. As outlined in the Draft EIS, most treatments contemplated under the action alternatives (e.g., tree removal, thinning, road construction) have the potential to adversely impact aquatic resources, including surface and ground waters, wetlands, streams, riparian areas, and their supporting hydrology.

Watersheds: The GMUG reclassified Watershed Condition Class as part of a 2011 national effort. We understand that the USFS bases watershed condition on a 12-indicator model that considers both aquatic and terrestrial physical and biological indicators. The Draft EIS explains that a watershed is considered to be functioning properly (Class 1) if the physical attributes are appropriate to maintain or improve biological integrity (i.e., the watershed is functioning in a manner similar to natural Wildland conditions). Class 2 and Class 3 watersheds have impaired function because some physical, hydrological, or biological thresholds have been exceeded. According to the Draft EIS, the GMUG includes 231 watersheds. There are 156 Class 1 (functioning properly) watersheds, 75 Class 2 (functioning at risk) watersheds, and no Class 3 (impaired function) watersheds in the area. Of the 156 Class 1 watersheds, 51 are borderline Class 1/Class 2. Additionally, 212 of the 231 watersheds in the GMUG include state delineated Source Water Areas. These areas are managed for multiple use outputs while providing protection of water quality to meet municipal water supply needs.

### **Recommendations**

The Draft EIS states that it is unlikely that proposed treatments will result in a change in Watershed Condition Class score. Surveys will identify areas of concern to be avoided, such as fens or wetlands, and effects tracking will evaluate potential adverse or beneficial effects of the proposed treatment. If

treatment-specific surveys indicate that the treatment could move the watershed toward a more impaired condition, the proposed treatment may be modified and monitoring will be conducted.

Appendix B includes project design features to assist with water quality and soil productivity objectives to protect watershed resources. Appendix C includes the Pre-Treatment Checklist, with the first planning step being identification of priority watersheds for treatment. We support the USFS's intent to modify treatment as needed to avoid increasing impairment of watershed conditions as outlined under the soil and water surveys. However, the instructions lack additional detail for modification prescriptions. To the extent practical, we recommend including information in the Final EIS detailing treatment option approaches. We recommend the Final EIS more specifically identify potential project impacts and the treatment options available to prevent further degradation and reach watershed health objectives if project design features and BMPs fail, such as those outlined in Appendix B and Table 15. Additional information could include an expanded list of adaptive management options to address situations when monitoring does not indicate progress toward desired conditions as outlined in our scoping comments. For example, it may be necessary to consider larger buffers than usual around wetlands, streams and lakes during treatments.

Wetlands/Riparian Areas/Fens: There are approximately 128,019 acres of riparian areas including floodplains within the GMUG, with 20,671 acres of riparian areas occurring within opportunity areas. The USFS manages springs as a subset of wetlands due to their unique characteristics and importance to groundwater dependent ecosystems. Of the approximately 508 springs within the GMUG, 235 are within opportunity areas. Additionally there are approximately 8,071 acres of fen and associated wetlands within the GMUG; the Draft EIS states that nearly all are within opportunity areas. As outlined in the Draft EIS, fen communities are very sensitive to hydrologic alternations and restoration is extremely challenging once function has been impaired. Due to the slow rate of accumulation of peat in fens, these ecosystems are generally considered to be irreplaceable. In addition, there appears to be eight sensitive plant species on the GMUG known to occur in fens.

The wetlands typically found in mountain environments represent highly valuable upper montane and lower subalpine wetland ecosystems performing a variety of functions and values. The Executive Order 11990 – Protection of Wetlands (May 24, 1977) requires federal agencies to avoid to the extent practicable, long- and short-term adverse impacts associated with the destruction or modification of wetlands.

Fen wetlands provide important hydrological and water quality functions by improving water quality in headwater streams and may support rare assemblages of aquatic invertebrates. They also provide critical ecological functions such as providing base flows to streams during late summer and/or drought periods. The U.S. Geological Survey has also determined that peat wetlands are especially efficient filters of metals dissolved in groundwater and surface water. The capacity to filter metals contributes to improved water quality by lowering dissolved metal content in streams (Owens, D.O., and Breit, G.N., 1995), which is particularly relevant to the project area regarding the water quality standard (WQS) exceedances related to metals concentrations discussed below.

### Recommendations

The Draft EIS (p. 88) states that “There are at least 8,071 known fens within the GMUG and nearly all are within opportunity areas.” However, Table 13 (p. 87) identifies 3,073 acres of the total 8,071 acres are within opportunity areas. In addition, page 205 references a total of 11,034 acres of fens estimated within the GMUG, with 81% rated in “high” condition. We recommend this information be checked for consistency and clarified throughout the Draft EIS. Regardless, the acreage within this range is

substantial.

The EPA recognizes fen-type wetlands as ecologically critical in that they provide local and regional biodiversity. The U.S. Fish and Wildlife Service (USFWS) designated fen wetlands a Resource Category 1 with respect to the USFWS Peatland Mitigation Policy. The mitigation goal of USFWS Resource Category 1 is no loss of habitat values and the Peatland Mitigation Policy places the protection and avoidance of fen wetlands as a priority during CWA Section 404 reviews. Further underlying the uniqueness and importance of fen wetlands in Colorado, the Corps revoked the use of Nationwide Permits in fen wetlands to protect this unique wetland type. In the EPA's view, these wetland ecosystems are, for all practical purposes, non-renewable and irreplaceable. Therefore, in accordance with the goal of no overall net loss of the nation's remaining wetland base for the Section 404 regulatory program, we strongly recommend that both direct and indirect impacts to these highly valued resources be avoided.

Because of the irreplaceable nature and rarity of montane fen wetland ecosystems, compensation for these wetland impacts is extremely difficult. The Draft EIS states that Forest Service policies and BMPs nationally and regionally severely restrict any activities in wetlands (including fens) and limit activities in the water influence zone (WIZ) around them, and as a result, activities associated with implementing this project will avoid fens. Although there are established design criteria, including buffers around fens and associated wetlands so that the use of mechanical equipment and proposed treatments are restricted in WIZs to protect habitat and functions (Draft EIS p. 88, Table 14), this does not appear to necessarily apply to roads. According to the Draft EIS, proposed roads would be located outside of fens and wetlands, and to the extent feasible, WIZs (p. 98). WIZs include riparian areas, floodplains and depressional recharge areas, and are some of the most ecologically diverse habitat types that provide bank stability, sediment filtering, streamside shading and nutrient input into streams and lakes (Draft EIS p. 88). We therefore recommend the Draft EIS clarify whether the placement of roads will be subjected to the same buffer zones as mechanical equipment in relationship to the water resources listed in Table 14, and advocate that roads also be located outside of WIZs to reduce adverse impacts to these hydrology supporting aquatic ecosystems. Road cuts can potentially intercept groundwater that supports fens. Finally, we support the USFS's efforts to potentially move some existing roads located within the WIZs or other sensitive areas, and employ improved erosion control measures to reduce impacts to riparian areas and provide a beneficial effect to watersheds.

Water Quality: The Draft EIS briefly mentions that the State of Colorado identified segments in 21 streams totaling approximately 141 miles that do not meet water quality standards within the Forests' boundaries, generally due to metals concentrations. The Draft EIS states that proposed treatment activities are unlikely to affect the specific impairments in the identified waterbodies, and that design features and BMPs will be used to minimize the potential to adversely impact other water quality parameters, such as sediment, turbidity and temperature.

#### Recommendations

Although the Draft EIS references the project file to find a list of the impaired streams and their beneficial uses, we recommend that these details be included in the Final EIS. Currently the limited information contained in the Draft EIS is not sufficient to understand baseline conditions, including the specific delineation of mine-induced impaired waters versus those waters with impaired water quality parameters that are more at risk for project impacts (e.g., temperature, dissolved oxygen, pH, sediment, turbidity). We recommend that the Final EIS include Clean Water Act (CWA) Section 303(d) listed waterbodies that are within the GMUG, including any occurring within opportunity areas, and more specifically identify potential project impacts along with specific design features and BMPs that will be

used to avoid or minimize these impacts. Proposed road locations, especially stream crossings, and treatment activities could exacerbate impaired conditions.

We recommend that the Final EIS analyze potential impacts to surface waters related to erosion and sedimentation from land disturbance and stream crossings, as well as potential impacts associated with project treatment activities. We also recommend that the USFS (a) analyze potential impacts to impaired water bodies within and/or downstream of the planning area (including water bodies listed on the most recent EPA-approved CWA § 303(d) list), and (b) coordinate with the Colorado Department of Public Health and Environment (CDPHE) if there are identified potential impacts to impaired water bodies (in order to avoid causing or contributing to the exceedance of water quality standards). Where a Total Maximum Daily Load (TMDL) exists for impaired waters in the area of potential impacts, pollutant loads should comply with the TMDL allocations for point and nonpoint sources. Where new loads or changes in the relationships between point and nonpoint source loads are created, we recommend that the USFS work with CDPHE to revise TMDL documents and develop new allocation scenarios that ensure attainment of water quality standards. Where TMDL analyses for impaired water bodies within or downstream of the planning area still need to be developed, we recommend that proposed activities in the drainages of CWA impaired or threatened water bodies be either carefully limited to prevent any worsening of the impairment or avoided where such impacts cannot be prevented. We recommend that mitigation or restoration activities be considered in the Final EIS to reduce existing sources of pollution, and to offset or compensate for pollutants generated.

In much the same way as Figure 15 illustrates watershed condition classes and fen/wetland locations in the Draft EIS, we recommend that the Final EIS include a map identifying the locations of the impaired streams in relationship to the project area. This additional information will enable stakeholders to more fully understand the potential for impacts from this landscape approach project.

In addition, for streams with a coldwater designation, we recommend consideration of specific measures to reduce impacts to stream temperature. Such measures may include limiting removal of trees in areas where no other trees or shrubs provide stream shading along with tree planting or cattle exclosures designed to restore vegetative shade to impacted streams.

Design Features, BMPs, and Adaptive Implementation and Monitoring: We support the efforts of the USFS to avoid and minimize impacts through design features and BMPs. We also support the adaptive implementation framework developed to define treatment locations and design, define monitoring questions, require annual monitoring review and evaluation of treatment effects, and adjust management towards desired conditions throughout the project implementation period. We recommend expanding protective measures to include the following:

- Develop design criteria and/or mitigation measures to protect reservoirs, particularly if treatments could occur adjacent to these important resources. Such measures may include operational requirements for treatments implemented directly adjacent to reservoirs and/or monitoring impacts to reservoir water quality from project activities.
- Specify steps to protect range improvements (fencing, exclosures, etc.) that protect water quality and habitat.

## **2) Air Resources Analyses**

We appreciate that many of our scoping recommendations related to air resources were addressed in the Draft EIS. Please see our remaining comments and recommendations below.

Air Quality Modeling: The Draft EIS references the U.S. EPA's Motor Vehicle Emissions Simulator as MOVES2014b that was used for generating equipment emissions factors in the analysis. Please note that there was an earlier version of this model called MOVES2010b. However, the most recent version is MOVES2014. Please clarify in the Final EIS which version was used for the analysis. Although MOVES2010b can currently be utilized for NEPA purposes since it's within the 2-year grace period of the release date, the latest version of MOVES2014 is recommended for new projects coming online as it includes updated information helpful for analysis.

Greenhouse Gas (GHG) Emissions and Climate Change: We appreciate the discussion of climate change and the inclusion of GHG emissions inventories in the Draft EIS. We note that the exact locations for treatments have yet to be determined, and the Draft EIS states that net effects of the project on greenhouse gases is unknown given carbon sequestration from forest regeneration and vegetation growth. The Draft EIS references the Council on Environmental Quality (CEQ) December 2014 Revised Draft Guidance for Federal Agencies' Consideration of GHG Emissions and Climate Change. We believe the Draft Guidance offers a reasonable approach for conducting analyses of GHGs and climate change impacts. This approach allows an agency to present the environmental impacts in clear terms and with sufficient information to make a reasoned choice between the no-action and alternatives and mitigation. We note that the Draft EIS compares the GHG emissions to state and national emissions; we believe this approach does not provide meaningful information for a planning level analysis. We recommend that the NEPA analyses provide a frame of reference, such as an applicable federal, state, tribal or local goal for GHG emission reductions, and discuss whether the emissions levels are consistent with such goals.

### **3) Other Considerations**

Site-Specificity of Analysis: To the extent possible, we recommend including as much site-specific project information in the NEPA documentation that is known at the time of the Final EIS. This would include maps of specific locations identified for various types of treatments, including prescribed fires and landscape thinning, so that project effects would be more accurately analyzed. This may assist with minimizing the risk of future NEPA documentation if it's necessary to revise the analysis based on changes in project design. At a minimum, we recommend that the Final EIS include maps that specify these types of treatments in opportunity areas.

Preferred Alternative: The Draft EIS does not identify the lead agency's Preferred Alternative. As required under Section 1502.14 of the Council on Environmental Quality's Regulations for Implementing the National Environmental Policy Act, unless another law prohibits expression of such a preference, the Preferred Alternative will need to be identified in the Final EIS. This will ensure that the public will have an opportunity to comment on the selection of the Preferred Alternative during the Final EIS review rather than through the USFS objection processes. Although lead agencies are not required to analyze the final decision on an alternative (i.e., per the ROD), it seems reasonable and judicious to include such an analysis in the Final EIS if the draft decision is known at that time. We recommend that the USFS' Preferred Alternative is clearly described in the Final EIS, or an explanation be provided as to why it is not identified.

Special-Status and Threatened and Endangered Species: The project area may contain special status species, including Endangered Species Act listed threatened species, endangered species, and/or their designated critical habitat, as well as candidate species. These include Gunnison sage-grouse, Mexican spotted owl, Southwestern Willow Flycatcher, Yellow-billed cuckoo, Uncompahgre Fritillary butterfly, Black-footed ferret, and the Canada Lynx. We recognize that the USFS will discuss the Preferred Alternative if it differs from the currently proposed action alternatives with the USFWS as it relates to potential impacts to these species if present in the project area. To best inform the decision-maker and



the public, we recommend the NEPA documentation include any USFWS recommendations to reduce potential impacts to these species including project design criteria, mitigation, conservation measures and monitoring measures. The results of the USFWS discussions and subsequent recommendations will be a valuable addition to the Final EIS.

### Closing

Consistent with Section 309 of the CAA, it is the EPA's responsibility to provide an independent review and evaluation of the potential environmental impacts of this project. Based on the procedures the EPA uses to evaluate the adequacy of the information and the potential environmental impacts of the proposed Project, the EPA is rating the Draft EIS as Environmental Concerns – Insufficient Information (EC-2). The "EC" rating indicates that the EPA review has identified environmental impacts that need to be avoided in order to fully protect the environment. The "2" rating indicates that the EPA has identified additional information, data, analyses, or discussion that we recommend for inclusion in the Final EIS. Because a Preferred Alternative was not identified in the Draft EIS, each of the action alternatives are receiving an EC-2 rating (we do not rate the no action alternative). A description of the EPA's rating system can be found at: <http://www.epa.gov/compliance/nepa/comments/ratings.html>.

Although the action alternatives received an EC-2 rating in this review, we do not view them as equivalent based on the Draft EIS analysis. As outlined above, the opportunity areas increase in size from Alternative 3 to Alternatives 2 and 4. In Alternative 3, fewer roads would be constructed than in Alternatives 2 and 4. Alternative 3 has a maximum potential estimate of 70 miles of temporary roads and 10 miles designed roads compared to Alternatives 2 and 4 that have 260 and 60 respectively; Alternative 4 has the highest potential for dispersal of road impacts due to the larger affected landscape for commercial treatments. Consequently, Alternative 3 would have reduced effects to water resources compared to Alternatives 2 and 4, and Alternative 4 would have increased effects compared to Alternative 2. Regarding fen wetlands, Alternative 3 would include the fewest number of fens or other wetlands, where Alternative 4 has the potential to include the greatest number of fens and other wetlands within commercial treatment areas. Commercial mechanical treatment is restricted to suitable timber lands, which is on slopes <40%. This increases the chance for conflict with fens and wetlands, which occur on shallower slopes.

We appreciate the opportunity to participate in the review of this project, and are committed to working with you as you prepare the Final EIS. If we may provide further explanation of our comments during this stage of your planning process, please contact me at 303-312-6704, or your staff may contact Melanie Wasco, Lead NEPA Reviewer, at 303-312-6540.

Sincerely,



for

Philip S. Strobel  
Director, NEPA Compliance and Review Program  
Office of Ecosystems Protection and Remediation

